

## CLAIMS

1. A communication protocol suitable for bi-directional VoIP communications with media streams including audio and/or video data, and based on a real-time transport protocol as described in IETF RFC 1889, wherein packets mainly comprised of a header part and a payload part are exchanged between at least two users, thus forming a RTP channel, wherein at least one sub-channel is embedded within the RTP channel, said sub-channel being adapted to carry command, signaling and/or information data.

2. The communication protocol according to claim 1, wherein the header part of each packet comprises at least one extension bit in a predetermined place whereby allowing to provide one or several additional fields in the header or in a header extension of said packets to carry said command, signaling and/or information data.

3. A method for operating a bi-directional VoIP communication over an IP network, based on a real-time transport protocol as described for example in IETF RFC 1889, wherein media streams including audio and/or video data are exchanged, over a RTP channel, between at least two users, in the form of packets mainly comprised of a header part and a payload, characterised in that additional command, signaling and/or information data is transmitted through at least one sub-channel embedded within the RTP channel and available in both transmission directions.

4. The method according to claim 3, wherein the header of each transmitted packets comprises at least one extension bit in a predetermined place whereby providing one or several additional fields in the header or in a header extension of said packets to carry said command, signaling and/or information data.

5. The method according to claim 4, wherein providing additional field(s) to carry said additional signaling data for transmission between users consists, in relation to the IETF RFC 1899 protocol features and for each transmitted packet, in setting the marker bit (M) and the extension bit (X), in coding the payload type bits (PT) with the information of the user to user signals and in providing a header extension following the normal RTP header and comprising a profile indication field, a length indication field, a signaling type indication field and several bytes for

receiving the additional data to be carried, the number of bytes corresponding to the value of the content of the length indication field.

6. A method according to claim 3, wherein the bi-directional VoIP communication is operated on the basis of the protocol as defined in claim 1.

7. A method according to claim 3, wherein, upon reception of a RTP packet, the communication terminal of the user on the reception side analyses the header, in particular the at least one extension bit, of the received packet and takes into account the command, signalling and/or information data contained in the additional fields of said header or header extension.

8. A multimedia telecommunication terminal adapted to perform a bi-directional VoIP communication based on a real-time transport protocol (RTP) as described in IETF RFC 1889, wherein said terminal comprises means to carry out the method according to claim 3.